

Midwest Renewable Energy Tracking System, Inc.

The Role of Tracking Systems in the Clean Power Plan

January 14, 2016

Iowa 111(d) Stakeholder Meeting

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Background

- **Mission:** M-RETS efficiently tracks and verifies renewable energy generation in collaboration with stakeholders, facilitating renewable energy development in the public interest
- Independent non-profit
- Developed out of stakeholder process with regulators, RE advocates, generators & utilities similar to 111(d) stakeholder conversations

What is a Renewable Energy Certificate (REC)

- <https://youtu.be/opJMrzNauFQ>
- This short animated video illustrates how RECs are created, tracked, traded, and finally sold to end users.

Written and directed by Center for Resource Solutions, www.resource-solutions.org.

Animated by Brian Stegall, www.bsteegs.com

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Current Board Members

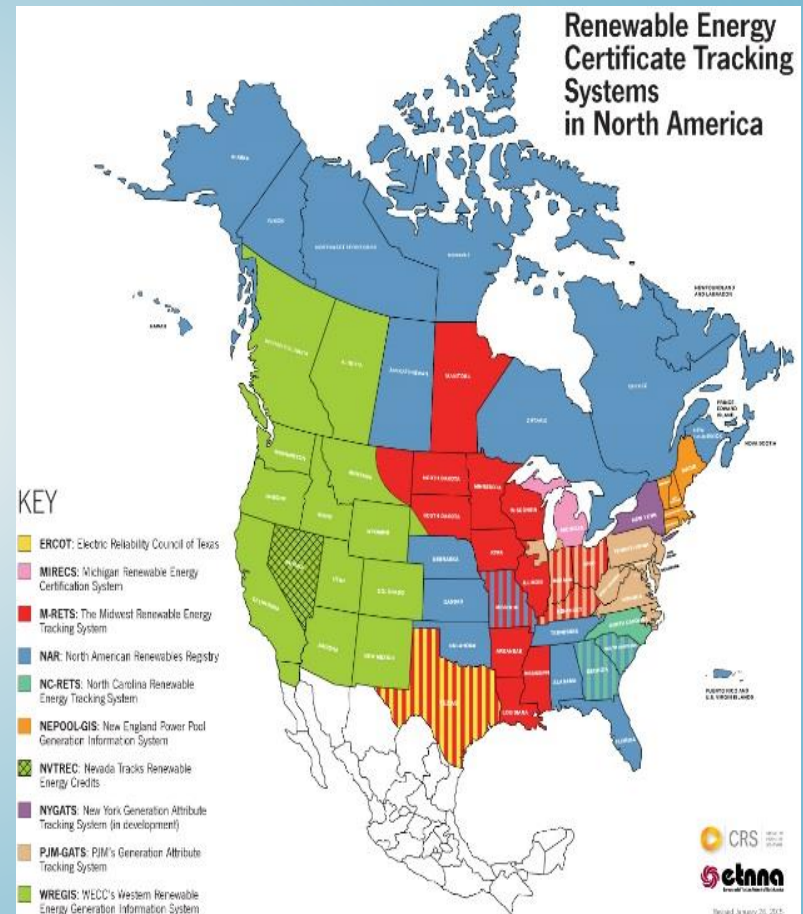
- Andrew Kell, Public Service Commission of Wisconsin, Board President
- Ronald J. Franz, Dairlyand Power Cooperative, Vice President
- Eric Schroeder, Great Plains Institute, Treasurer
- Kari Clark, Xcel Energy, Secretary
- Venkata Bujimalla, Iowa Utilities Board
- Dan Heim, Exelon/Constellation
- Amy Jordan, Manitoba Municipal Government
- Jeff Peters, Missouri River Energy Services

Primary Stakeholders

- State and provincial government renewable program administrators (regulators)
- Voluntary program administrators
- Renewable energy advocates
- Account Holders (fees paid for annual subscription and \$0.006/REC to issue, \$0.016/REC to retire)
 - Electric providers (muni, co-op and IOU)
 - Environmental Commodities/REC Brokers
 - Independent Power Producers or other large generators
 - Distributed generators and/or aggregators
 - Qualified Reporting Entities (data reporting)

Regional Footprint

- M-RETS primarily operates in the MISO footprint
- In response to stakeholder request, recently approved tracking of generation in AR, LA, KY, MO, MS, and TX
- M-RETS is regional, spreads costs over many users, results in efficient use of ratepayer dollars



Renewable Energy Certificates

1 MWh Renewable Energy =
1 Whole Certificate

Certificate No. 999-MN-01-2013-XXX-1-45,000

- Certificate Type
- Fuel Type
- Location
- Vintage



**Renewable
Energy
Certificate**

**Energy
(Null Power)**

**Renewable Portfolio
Standard Markets**

Voluntary Markets

Power Markets (ISOs)

Policy Driven and Position Neutral

- M-RETS does not determine eligibility for state, federal or voluntary programs
 - A generating unit is considered “renewable” if the energy generated is considered renewable by jurisdiction
 - Services are tailored to each state’s RPS compliance, all with their own definitions of eligible renewable energy
 - M-RETS does not determine REC shelf life or geographic eligibility
- M-RETS exists to facilitate and enable the most effective policy pathways for stakeholders

1. Generation



Certificate No. 999-MW-in-Lump REC-1-01-mw

Certificate Type: Renewable
Fuel Type: Wind
Location: MN

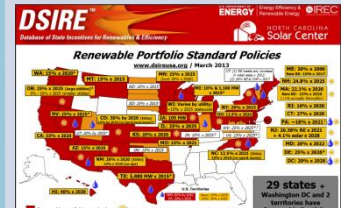
M-RETS

Asset Owner's Account

LSEs and Other Account Holders*

Traders*

5. Retirement of REC-State Obligation or Marketing Claim

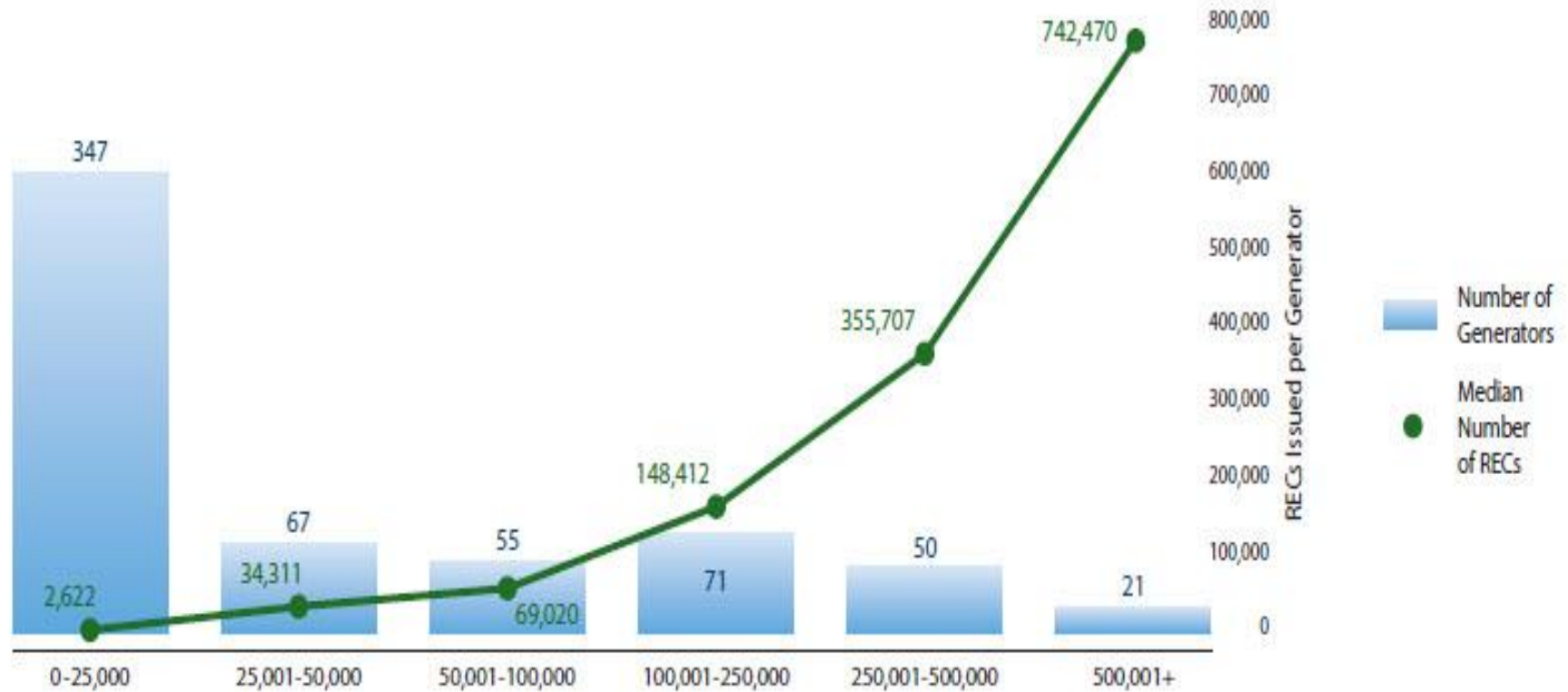


M-RETS

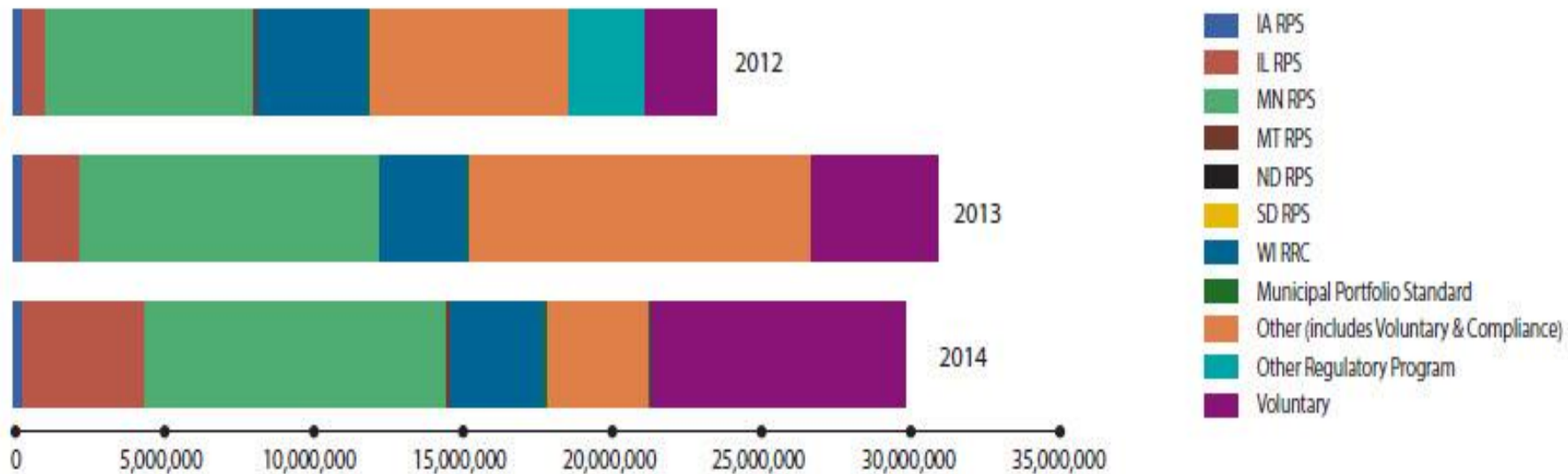
Basics of REC Tracking Systems

- In last 15-20 years, 10 tracking systems were created through state action (either individually or as consortium)
- Existing tool used in Renewable Energy markets to ensure that energy is metered, tracked and accounted in robust, safe repository
- Designated to independently issue RECs for production of RE by MWh with unique id #'s
- Use data supplied directly by transmission control areas, thereby assuring accurate data

2014 Renewable Generator and Certification Profile

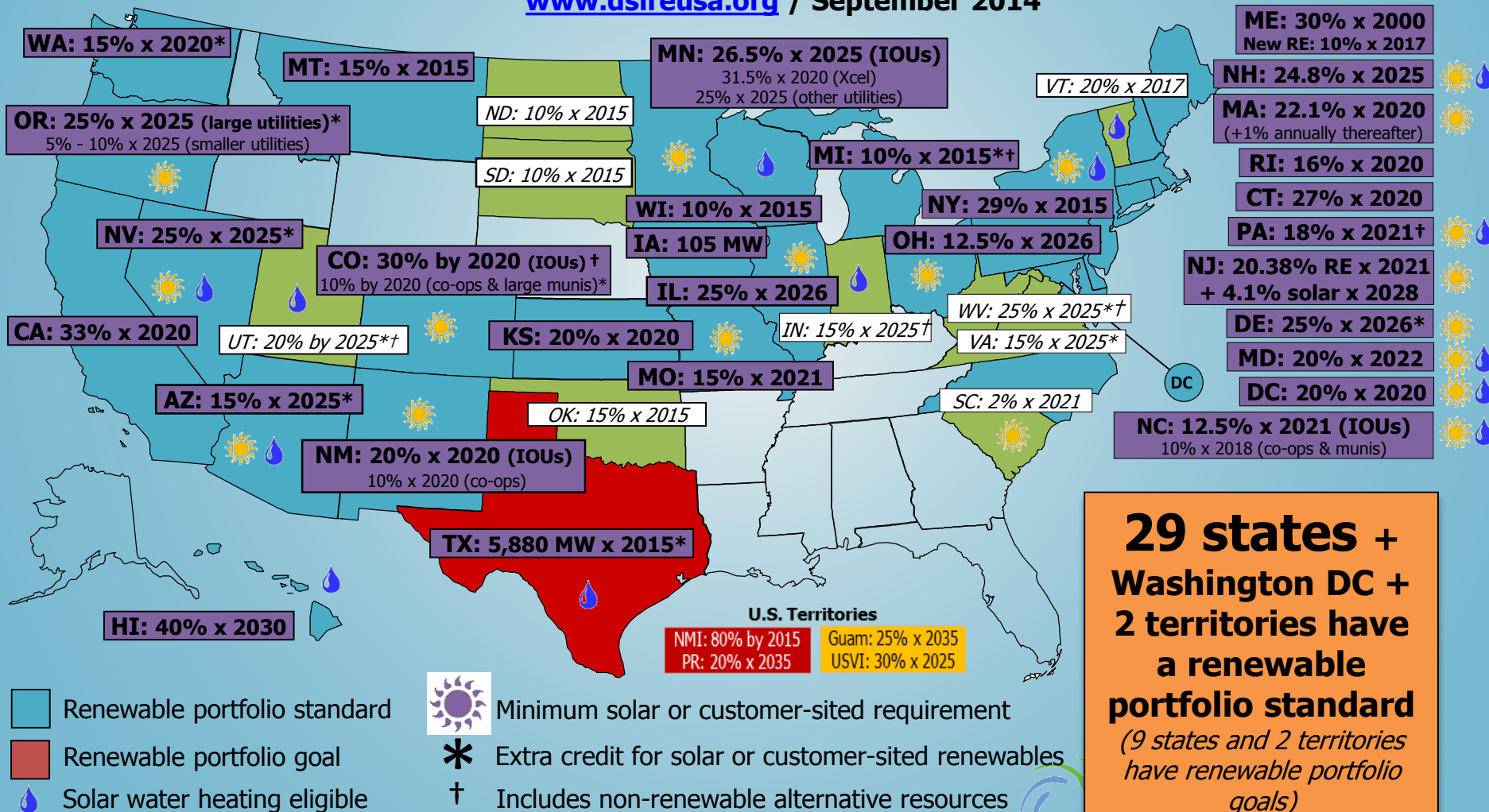


REC Retirements



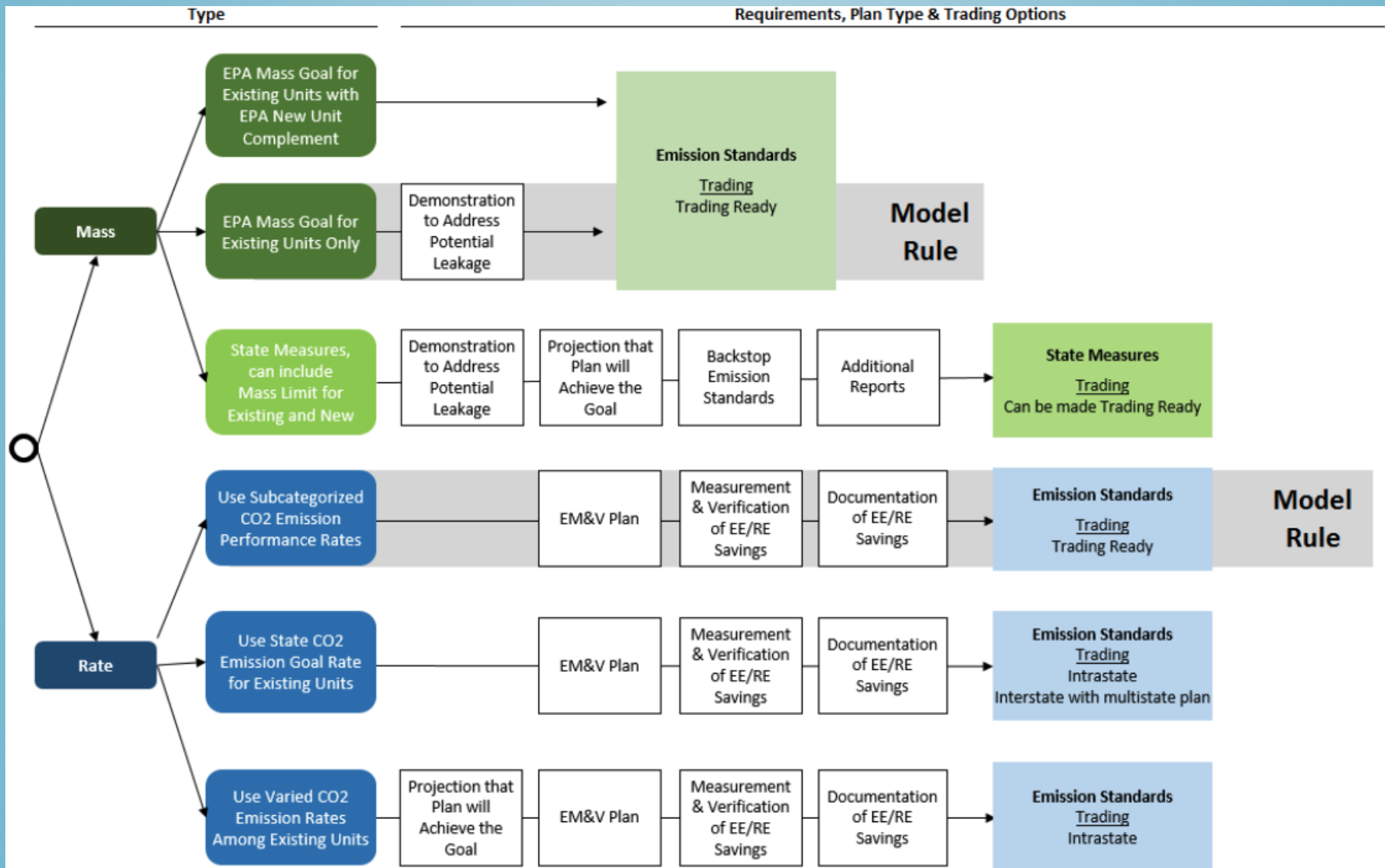
RPS and Compliance Roots

www.dsireusa.org / September 2014




29 states + Washington DC + 2 territories have a renewable portfolio standard
(9 states and 2 territories have renewable portfolio goals)


Future with the Clean Power Plan



Highlights of 111 (d) Efforts



How M-RETS Can Support State Compliance with the Clean Power Plan



M-RETS is a dynamic tracking and verification software platform that serves stakeholders in the power sector. Currently, the services provided by M-RETS facilitate the renewable energy credit (REC) marketplace both for voluntary purposes and for compliance with state renewable portfolio standards (RPS's). Just as state RPS's are variable, preferences for satisfying Clean Power Plan (CPP) emissions goals will vary among the states. Whatever pathways states choose to achieve their CPP goals, M-RETS will work with stakeholders to provide the information needed to demonstrate compliance to the EPA.

Being a policy-neutral non-profit, M-RETS is agnostic regarding the policy pathways adopted by the states it serves, and does not advocate for any particular CPP compliance approach.


This fact sheet provides an overview of CPP compliance options, the types of performance tracking these options entail, and initial thoughts on how M-RETS can be structured to meet the requirements of these options.

Options for CPP compliance
Under the CPP, states have two fundamental choices for compliance:


- A mass-based approach in which affected electric generating units (EGUs) must meet a total emissions (mass) goal. CO₂ limits are determined by generator, and allowances representing one ton of carbon are issued and can be traded and used for CPP compliance. States can choose to also implement complementary strategies, such as renewable portfolio standards or energy efficiency resource standards, to meet the mass-based emission requirement.
- A rate-based approach in which affected EGUs must meet a lbs/MWh emissions rate. The EPA has defined a new tradable instrument, the Emissions Rate Credit (ERC), which represents 1 MWh of zero-emitting generation. Many types of generation and energy saving programs are eligible to earn ERCs, which can in turn be used by EGUs to improve their emissions rates.

Each approach may be adopted with variations, and EPA has presented a model rule for each approach that is designed to be "trading-ready" to facilitate interstate trading of credits and/or allowances.

How can M-RETS help states track compliance?
M-RETS can provide the capabilities necessary to support any of the pathways states may choose. The goal for M-RETS is to provide a one-stop shop for states' CPP tracking needs:












RECs tracking: M-RETS already issues renewable energy certificates (RECs) based on measured and verified generation, and tracks RECs as they are traded both within and outside the region.



ERCs tracking: M-RETS could readily expand to issue and track ERCs on the behalf of all manner of eligible projects and programs. M-RETS could also provide information about the links between specific RECs and ERCs, which may be important for the voluntary RE market.

- To answer stakeholder questions, we conducted an extensive interview process and are examining potential roles M-RETS could play in helping states measure, verify and track reductions in carbon intensity.
- Areas of exploration include:
 - Tracking all power generation
 - Carbon reporting
 - Tracking ERCs

How M-RETS Can Support Clean Power Plan Compliance Pathways

Compliance Approaches			
State Policy Choice	Accountable Entitites, Accountability Metric	How M-RETS Could Support	
MASS-BASED: Utility- or Plant-level emissions budget, possibly with trading	<ul style="list-style-type: none"> Utilities or affected EGUs CO2 emissions (tons) 	   	<ul style="list-style-type: none"> Tracking CO2 emissions and allowances, including trading activity Issuing ERCs in the limited set of situations where ERCs can be generated in mass-based states for use in rate-based Issuing RECs and EECs as long as separate functions continue to exist for these instruments
RATE-BASED: Utility- or Plant-level emissions rates, possibly with trading	<ul style="list-style-type: none"> Utilities or affected EGUs CO2 emissions rate (lbs/MWh) 	    	<ul style="list-style-type: none"> Tracking all EGU generation (or affected EGUs only) and emissions to establish emission rates Issuing and tracking ERCs Issuing RECs and EECs as long as separate functions continue to exist for these instruments

More info and Public Reports Available at mrets.org



A screenshot of the M-RETS website. The navigation bar at the top includes links for Home, About M-RETS®, Resources, Events, M-RETS® News, and Training. The 'Resources' dropdown menu is open, showing options like Documents, Registration, Implemented Change Requests, Statutes, Useful Links, Frequently Asked Questions, Public Reports (which is circled in red), REC Imports & Exports, and Board of Director's Workspace. The main content area on the left describes the Midwest Renewable Energy Tracking System, mentioning participating states and provinces and the role of APX. On the right, there is a 'Registry Login' section with fields for Username and Password, and buttons for Sign in and Register. Below that is a 'News' section listing several board meetings from 2015. The footer contains copyright information and links to Privacy Policy and General Terms of Use.



Conclusion

- We understand the uncertainty around the CPP and are closely following the legal challenges
- We have a long history of working with states to ensure our system grants them the flexibility they need to achieve their specific policy objectives, we also see this as our role in assisting states with CPP compliance
- Please use M-RETS as a resource

Thanks and Contact Information

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